Bill-of-Quantities for 7800 cum Capacity Reservoir at Geeta Nagar I (Revised November 4, 2010)

					-				
					Kare			Amount	
Item				Γc	Local	Foreign	Lo	Local	Foreign
No.	Description	Unit	Quantity		Applicable			Applicable	
				Basic Rate	taxes and		Basic Rate	taxes and	
					duties etc.			duties etc.	
3.09 3.10	3.09 Providing, fixing, Testing and comissioning of IP65 protected decorative lighting luminaire Post top suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/ plate. 70 Watt HPSV 3.10 Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor armoured of IS:7098-I approved make in ground as	Nos.	2						
	per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, llnd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as								
Ø	4/CX 25 mm ²	٤	250						
q	4/CX 16 mm ²	ш	750						

Cost Estimate for 1100 cum Capacity Reservoir at Geeta Nagar II (Revised November 4, 2010)

					Rate			Amount	
				ľ	Local	Foreign	Lo	Local	Foreign
Item No.	Description	Unit	Quantity	Basic	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
3.10	Providing, fixing, Testing and comissioning of IP65 protected decorative lighting luminaire Post top suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/ plate.								
В	70 Watt HPSV	Nos.	2						
3.11	Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor armoured of IS:7098-I approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth,compaction of earth, making necessary connection, testing etc. as required of size								
a	4/CX 25 mm ²	Е	150						
q	4/CX 16 mm ²	ш	200						

Cost Estimate for 1100 cum Capacity Reservoir at Geeta Nagar II (Revised November 4, 2010)

					Rate			Amount	
				Ľ	Local	Foreign	Lc	Local	Foreign
Item No.	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable Basic Rate taxes and duties etc.	
3.12	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.								
ß	4/CX 25 mm ²	Nos.	4						
q	4/CX 16 mm ²	Nos.	41						
C	Feeder Pillar	Nos.	1						
3.13	Supply Install test and commissioning 11kv /433v 3 phase main transformer (with neutral in secondary side) complete with spport.	Nos.	-						
		SUB T	SUB TOTAL						
		GRAND TOTAL	TOTAL						

Bill-of-Quantities for 7800 cum Capacity Reservoir at Geeta Nagar I (Revised November 4, 2010)

o	6	a	1.18			1.17	Item No.
Providing and applying priming coat on concrete/masonry/Asbestos Cement /plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand papering as required. (Sample and brand is to be got approved from Engineer incharge before use)	Providing and applying washable oil bound distemper of approved colour and shade to new surfaces in two coats including scaffolding, preparing the surfaces (excluding the primer coat) complete.	Providing and applying primer coat for wall surface to receive oil bound distemper treatment.	Painting	parapet walls for water proofing.	with two layers of polyester felt and gravel to roof and	Water proofing on Koof Providing and laving three lavers of cold bituminous paint	Providing and erecting 3.0 m. high chain link fencing with chain link having hole size 65 mm x 65 mm supported on M.S. angle post of size 50 mm x 50 mm x 6 mm at 2.40 m c/c including excavating pits for foundation fixing post in M 20 concrete of size 45 cm x 45 cm fixing chain link with 3.25 mm (10 guage) G.I. wire at top and bottom and with oil paint etc. complete and Providing and fixing steel frame 4.0 m wide Double leaf Entrance gate (exterior) complete in all respect including welding, paintting, finishing etc. complete and as per drawings and specification
m ₂	· m²	m ²			m ²		Unit
3,000	3,000	3,000			900		Quantity 220
							Local A Basic Rate t d
							Rate cal Applicable taxes and duties etc.
							Rate cal Foreign Applicable taxes and duties etc. Ba
							sic Rat
							Amount Local Applicable taxes and duties etc.
							Foreign

Bill-of-Quantities for 7800 cum Capacity Reservoir at Geeta Nagar I (Revised November 4, 2010)

Item No.	ь	0	р	e	Γ	_	H	h
	Providing and fixing in position Stainless Steel ladder inside the reservoir including cost of material and labour involved, welding, cages, anchoring and applying 3 coat of anti-corrosive paint, etc. complete and as per drawings and specification.	Providing and fixing in position Access aluminium ladder out side the reservoir including cost of material and labour involved, complete and as per drawings and specification.	Providing and fixing steel frame for internal door including complete in all respect complete and size as per drawings and specification.	Providing and fixing in position steel windows with openable frame, of approved quality, fixture and fastenings, handle, stopper etc. complete as per drawings and specification.		Providing and fixing steel frame 14 inch Roof ventilator including complete in all respect including welding, painting, finishing etc. complete and as per specification.		Providing and fixing Fiber glass reinforced plastic doors for external door in Chlorine room including complete in all respect complete and size as per drawings and specification.
Unit	Nos.	Nos.	m ²	m ²		No.		m ²
Quantity	1	1	13	15		2		7
Le Basic Rate								
Local Applicable taxes and duties etc.								
Foreign	,							
L Basic Rate								
Amount Local Applicable taxes and duties etc.	·							
Foreign								

Bill-of-Quantities for 10250 cum Capacity Reservoir at Amiya Nagar (Revised November 4, 2010)

Item									
				Local	cal	Foreign	T	Local	Foreign
Š	Description	Unit	Quantity		Applicable			Applicable	
				Basic Rate	taxes and		Basic Rate	taxes and	
					duties etc.			duties etc.	
В	70 Watt HPSV	Nos.	2						
3.10	Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor armoured of IS:7098-I approved								
	make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd								
	class bricks covering, refilling earth, compaction of earth, making								
	necessary connection, testing etc. as required of size								
а	4/CX 25 mm ²	ш	200						
q	4/CX 16 mm ²	ш	009						
3.11	Supplying and making end terminations with heavy duty single compression brass oland SIRG type aluminium lines duly crimned								
	with crimping tool, PVC tape etc for following size of Armoured PVC								
	insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.								
a	4/CX 25 mm ²	Nos.	4						
p	4/CX 16 mm ²	Nos.	18			:			
, 15	E 2 2 4 2 11 2 2	:							
3.12	reder Fillar	Nos.	-						
3.13	Supply Install test and commissioning 11kv /433v 3 phase main	() () () () () () () () () ()	_						
	transformer (with neutral in secondary side) complete with spport.	NOS.	-						
2 14	States 15: 25: 25: 25: 25: 25: 25: 25: 25: 25: 2								į
t ::	ball bearing capacitor starter with regulator and other accessories for	Nos.	2						
	complete operation.								
		SUB T	TOTAL						
		GRAND TOTAL	TOTAL						

Bill-of-Quantities for 4500cum Capacity Reservoir at Lichubagan (Revised November 4, 2010)

					Rate			Amount	
				Local		Foreign	T	Local	Foreign
Item No.	Description	Unit	Quantity		Applicable			Applicable	
				Basic Rate	taxes and		Basic Rate	taxes and	
					duties etc.			duties etc.	
3.09	Providing, fixing, Testing and comissioning of IP65 protected decorative lighting luminaire Post top suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/ plate.								
В	70 Watt HPSV	Nos.	2						
3.10	Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor armoured of IS:7098-I approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, llnd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size								
В	4/CX 25 mm ²	Е	150						
q	4/CX 16 mm ²	٤	200						
3.11	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.								
В	4/CX 25 mm ²	Nos.	4						
q	4/CX 16 mm ²	Nos.	14						
O	Feeder Pillar	Nos.	-						
3.12	Supply Install test and commissioning 11kv /433v 3 phase main transformer (with neutral in secondary side) complete with spport.	Nos.	-						
3.13	Supply and install ceiling fan (1200mm sweep) complete with double ball bearing capacitor starter with regulator and other accessories for complete operation.	Nos.	2						
		SUB TOTAL	OTAL						
		GRAND TOTAL	TOTAL						
			,						

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Bill-of-Quantities for 7800 cum Capacity Reservoir at Narkasur (Revised November 4, 2010)

				,	Rate			Amount	
				Γ_0	Local	Foreign	Local	cal	Foreign
Item No.	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
q	4/CX 16 mm ²	ш	009						
3.12	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.								
а	4/CX 25 mm ²	Nos.	4						6
þ	4/CX 16 mm ²	Nos.	18						
3.13	Feeder Pillar	Nos.	1						
3.14	Supply Install test and commissioning 11kv /433v 3 phase main transformer (with neutral in secondary side) complete with spport.	Nos.	-						
3.15	Supply and install ceiling fan (1200mm sweep) complete with double ball bearing capacitor starter with regulator and other accessories for complete operation.	Nos.	2						
		GRAND TOTAL	TOTAL						

	Bill-of-Quantities for 20500cum Capacity Reservoir at Sonaighuli (Revised November 4, 2010)	Ocum Cap	acity Reservo	ir at Sonaigh	uli (Revised N	ovember 4, 20]	[0]	į	
					Rate			Amount	
Item				Local	cal	Foreign	ı	Local	Foreign
Ž.	Description	Unit	Quantity		Applicable		Basic	Applicable	
				basic Kate	taxes and duties etc.		Rate	taxes and duties etc.	
3.09	Providing, fixing, Testing and comissioning of 1P65 protected decorative lighting luminaire Post top suitable for following								
	lamps, made of powder coated cast aluminium housing, moulded								
	acrylic lamp compartment with built in anodized aluminium								
	cover, including the cost of control gear complete in all respect.								
	Bollards are including cost of decorative base pipe/ plate.								
B	70 Watt HPSV	Nos.	2						
3.10	Laying XLPE insulated & P.V.C. she								
	conductor							-	
	IS:7098-1 approved make in ground as per IS:1255								
	Including excavation of 30cmx/5cm size trench, 25 cm								
	trick under layer of sand, lind class bricks covering, refilling								
	earth, compaction of earth, making necessary connection,								
	testing etc. as required of size								
8	4/CX 25 mm ²	٤	200						
م ا	4/CX 16 mm ²	٤	009						
11 6	Commence and according to the second design of the								
3.11	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium								
	conductor cable of 1100 volt grade as required of size.								
g	4/CX 25 mm ²	Nos.	4						
р	4/CX 16 mm ²	Nos.	18						
၁	Feeder Pillar	Nos.	-						
3.12	Supply Install test and commissioning 11kv /433v 3 phase main								
	transformer (with neutral in secondary side) complete with spport.	Nos.	-						
3.13	Supply and install ceiling fan (1200mm sweep) complete with		,						
	double ball bearing capacitor starter with regulator and other accessories for complete operation.	Nos.	7						
		SUBT	JB TOTAL						
		GRAND	AND TOTAL						
			0000	715071					

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	Bill-of-Quantities for 20500cum Capacity Reservoir at Sonaighuli (Revised November 4, 2010)	Ocum Cap	acity Reservo	ir at Sonaighu	ili (Revised N	ovember 4, 201	(0)			ļ
					Rate			Amount		
Item				Local	al	Foreign	1	Local	Foreign	
Š	Description	Unit	Quantity		Applicable		Racir	Applicable		
				Basic Rate	taxes and		Rate	taxes and		
					duties etc.		TABLE	duties etc.		
1.12	Brick work for Service building									
	Construction of Brick masonry for super structure of 300 mm thick walls in CM (1:6) prop.using First class best quality table									
	moulded bricks including cost and conveyance of all materials, labour, scaffolding, Curing etc., complete for finihsed item of	m ³	40							
	work and as per drawing and specification.									
1.13	Flooring									
	Providing and laying Ceramic tile flooring in upper floor of Service Building hath room chlorination									
	storage room using approved quality and finishing to required	m ²	150							
	level, curing, etc., complete all as per specifications.									
1.14	Plastering									
g	Providing and applying cement plaster 6 mm thick to ceiling in single coat in cement mortar 1:3 with out neeru finish to concrete	m ²	50							
i	surface in all positions including scaffolding and curing etc.									
	Providing and applying internal cement plaster 12 mm thick in a single coat in cement mortar 1:4 without neeru finish to concrete									
٩	or brick surface in all positions including scaffolding and curing	m ₂	40							
	complete. Froviding groove at joint of b.b.Masoury and concrete members complete.	_								

	Bill-of-Quantities for 20500cum Capacity Reservoir at Sonaighuli (Revised November 4, 2010)	00cum Cap	acity Reservo	ir at Sonaigh	uli (Revised N	ovember 4, 201	(0)		
					Rate			Amount	
Thomas				Lo	Local	Foreign	Г	Local	Foreign
	Description	Unit	Quantity		Applicable		Pocio	Applicable	
				Basic Rate	taxes and		Bate	taxes and	
					duties etc.			duties etc.	
а	For Reservoir	m ³	7,100						
þ	for Service building	m ₃	110						
1.09	Providing and fixing in position steel bar reinforcement (Tor Steel Fe-415 Grade) of various diameters for RCC footings, foundations, slabs, beams, columns, Retaining wall. newels, chajjas, lintels, copings, chairs and accessories, rebars in service building, Brick work etc. as per specification and drawings; including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required, etc. complete. (including cost of binding wire).	Kg.	1,087,400						
1.10	Providing and placing in position suitable PVC water Stops confirming to IS:12200 for construction joints between two RCC members.	ш	25,900						
1.1	Providing and fixing 20mm dia G.I. medium 'B' class railing with two horizontal pipes and 1.5 Mtr. Long vertical pipe 1.5 Mtr. Centre to cente with all accessories, like elbows, tees etc., including welding, thereading and embedding in cement concrete M:20, block of size 30X30X40cm with 2 nos angle iron 25x25x5mm size holdfast complete as per drawings and specification	Œ	150						

Cost Estimate for 300 cum Capacity Reservoir at Ramsa Hill II (Revised November 4, 2010)

					Rate			Amount	
				Γ_0	Local	Foreign	Local	cal	Foreign
Item No.	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
3.09	Supply, erection, Testing and comissioning of IP65 protected decorative lighting luminaire Post top suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base mine/ plate								
В	70 Watt HPSV	Nos.	2						
3.10	Supply & Laying XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor armoured of 1S:7098 I approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand,IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.								
В	4/CX 25 mm ²	ш	250						
q	4/CX 16 mm ²	ш	750						
3.11	Supplying and making end terminations with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of								
В	4/CX 25 mm ²	Nos.	4						
q	4/CX 16 mm ²	Nos.	16						
O	Feeder Pillar	Nos.	-						
3.12	Supply Install test and commissioning 11kv /433v 3 phase main transformer (with neutral in secondary side) complete with spport.	Nos	-						
		SUB	SUB TOTAL						
		GRAND	RAND TOTAL						
			Page 1	Page 13 of 13					

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Cost Estimate for 300 cum Capacity Reservoir at Ramsa Hill II (Revised November 4, 2010)

				,	Rate			Amount	
				Local	cal	Foreign	Local	cal	Foreign
Item No.	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
1.13	Providing and erecting 3.0 m. high chain link fencing with chain link having hole size 65 mm x 65 mm supported on M.S.angle post of size 50 mm x 50 mm x 6 mm at 2.40 m c/c including excavating pits for foundation fixing post in M 20 concrete of size 45 cm x 45 cm x 45 cm fixing chain link with 3.25 mm (10 guage) G.I. wire at top and bottom and with oil paint etc. complete and Providing and fixing steel frame 4.0 m wide Double leaf Entrance gate (exterior) complete in all respect including welding, painting, finishing etc. complete and as per drawings and specification.	E	130	·					
1.14	Water proofing on Roof								
	Providing and laying three layers of cold bituminous paint with two layers of polyester felt and gravel to roof and parapet walls for water proofing.	m ²	100						
								_	
1.15	Painting								
а	Providing and applying primer coat for wall surface as per specification	m ²	200						
q	Providing and applying washable oil bound distemper of approved colour and shade to new surfaces in two coats including scaffolding, preparing the surfaces complete.	m ²	200						
v	Providing and applying priming coat on concrete/masonry/plastered surfaces including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter and sand papering as required as per specification.	B ²	200						
Ф	Painting on new surface with duco paint (IC or equivalent) to give an even shade (minimum 4 coats with preparation of surface by rubbing, primer coasts, duco filler putty including polishing etc complete:								
	on steel work	m ²	50						

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In walls, coluventilators are For Reservoir For Reservoir Providing and Steel Fe-415 foundations, sleen that inteleservice buildide drawings; into binding with vetc. complete. Providing and confirming to BCC member. DOOR & WI	Rate Amount	Local Foreign Foreign	Basic Rate	In walls, columns, roof slab, beams, lintels, chhajias,	nd stair etc.	. m ³ 200	Providing and fixing in position steel bar reinforcement (Tor Steel Fe-415 Grade) of various diameters for RCC footings, foundations, slabs, beams, columns, Retaining wall. newels, chajias, lintels, copings, chairs and accessories, rebars in service building, Brick work etc. as per specification and drawings; including bending, hooking the bars, binding with wires or tack welding and supporting as required, etc. complete. (including cost of binding wire).	Providing and placing in position suitable PVC water Stops confirming to IS:12200 for construction joints between two m 300 RCC members.	DOOR & WINDOW AND ROLLING SHUTTER	Providing and fixing steel frame 14 inch Roof ventilator including welding, painting, No. 2
			Description	In walls, columns, roof slab, beams, 1	ventilators and stair etc.	For Reservoir	Providing and fixing in position steel bar reir. Steel Fe-415 Grade) of various diameters for foundations, slabs, beams, columns, Retaining chajjas, lintels, copings, chairs and accesson service building, Brick work etc. as per sperawings; including cutting, bending, hoo binding with wires or tack welding and support etc. complete. (including cost of binding wire).	Providing and placing in position sui confirming to IS:12200 for constructi RCC members.	DOOR & WINDOW AND ROLLIN	Providing and fixing steel frame 14 inch I including complete in all respect including we finishing at complete and as a second state and a second stat

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		gn											
		Foreign											
	Amount	Local	Applicable										
r 4,2010)		1	Racic Rate										
ised November		Foreign											
Capacity Reservoir at Ramsahill (Revised November 4, 2010)	Rate	Local	Applicable	duties etc.									
ervoir at R		T	Basic	Rate									
Capacity Res		Onantity	\dantaly		1	1	•		0	1		SUB TOTAL	GRAND TOTAL
		Ilnit			Nos.	Nos			Nos			SUB	GRAN
Bill-of-Quantities for 23800 cum		Description			Feeder Pillar	Supply Install test and commissioning 11kv /433v 3	side) complete with sphort.	Supply and install ceiling fan (1200mm sweep)	complete with double ball bearing capacitor starter	with regulator and other accessories for complete	operation.		
		Item No			3.12	3.13		3.14					

Pumping Station at NARKASUR (Revised November 4, 2010)

	 	_		_				_	_	 		 			 		
3.03	3.02		3.01					3.00			2.09		2.08	2.07			Item No.
500kVA Power Transformer with Off-Circuit Tap changer 11kV /0.433 kV including Transformer Base	Providing, Laying, Terminations with Lugs and Glands of 11kV grade 3C X 120mm ² XLPE, aluminum armoured cable		GOD/DO along with CT, PT units for metering, ACSR Cunductors, Insulaters along with required accessories as per REC standards		Commissioning at site the following Items / Systems as per Tender Specification to be located in the Fields and the Control Room.	Testing at shop floor, Supply, Installation including related civil work like Transformer Base etc, Testing and	ELECTRICAL WORKS FOR PUMPS: Manufacturing,	Electrical & Instrumentation Work			Supply and Install hydrant . Cost shall include excavation, bedding, backfill, pipes, fittings, valves, valve box and all other items to complete installation.	Supplying, installing,300 mm MS pipe from Surge bypass to manhole. Cost shall include connection to the 300 mm pipe all fittings, all valves, flanges, bends, tees, couplings,	Washout to Manhole	Supply and Install Split Unit Air Conditioning for Control Room. Cooling Capacity should not be less than 20,000 BThU/Hr. Operating Voltage 230V			Description
Nos.	m		Set						SUB					Each			Unit
2	30		1						SUB TOTAL					1	,	Quantity	:
			·												Basic Rate	Local	
															Applicable taxes and		Rate
																Foreign	
															Basic Rate	Local	
															Applicable taxes and		Amount
																Foreign	

Pumping Station at NARKASUR (Revised November 4, 2010)

2.06	2.05		2.04		2.03				Item No.
Supplying, installing, commissioning & third party inspection of Monorail (manually operated) of capacity 3.0 T with all accessories, cable, connection, etc complete in all respect and as per specification and drawings. Contractor is responsible for and cost shall include selecting I beam, designing connection of I beam to roof beams, preparing and submitting shop drawings to Engineer.	Supplying, installing, commissioning & third party inspection of 700 mm \(\text{o} \) MS pipe from the fence line to the surge bypass piping for Inlet and Outlet pipe from Ramsa Hill Reservoir/ to Narkasur reservoir including connection to 400 and 500 mm intake/discharge pipes, continuous thrust blocks, all fittings, flange, bends, tees, reducer nut, bolt etc complete in all respect and as per drawings and specification.	700 MS Inlet and Outlet Pipe	supplying, installing, commissioning & third party inspection of 300 mm dia. MS pipe from inlet to outlet surge bypass with all fittings, All valves, pressure gauges, flanges, bends, tees, reducers enlargers, nuts, bolts and gaskets, sleeve coupling etc jointing with the inlet pipe as per specification and drawings.	Surge bypass section	Supplying, installing, commissioning & third party inspection of 500 mm dia. MS pipe fromthe 700mm MS pipe from Ramsa Hill reservoir to the pump inlet including connection to the 700mm pipe. Cost includes all fittings, all valves, pressure gauges, flanges, bends, tees, couplings, reducers enlargers, nuts, bolts and gaskets, sleeve coupling, etc jointing with the inlet pipe as per specification and drawings	Pump Inlet Piping			Description
Nos	LS		LS		Each				Unit
1	1		1		s		Quantity		
							Basic Rate	Local	,
							Applicable taxes and		Rate
							q	Foreign	`
							Basic Rate	Local	
							Applicable taxes and		Amount
							q	Foreign	

		Bill of Quantities	uantities						
					Rate			Amount	
				Lo	Local	Foreign	Lo	Local	Foreign
Item No.	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicabl e taxes and duties etc.	
3 03	and anniving fiscion handed enacy coating								
3.03	Providing and applying fusion bonded epoxy coating in Factory applied including primer coat to the internal and external surfaces of MS primes and people als and spray application of 2 part liq, id poo y l. in and coating for field joint in the last clessing or the surface, cost of all the material most and labour, taxes and duties etc complete. Thickness of internal lining and external coating shall not be less than 400 microns								
		m^2	82,634						
3.04	Handling, aligning, laying and jointing to correct line and level pipes, and specials etc in trenches. The rate to include transportation of pipes and specials from store yard to site, loading, unloading, hoisting, lowering, marginal cutting, wherever necessary, assembling, providing temporary supports etc., all with approved equipment complete for pipes of following diameters and thickness, the rate also shall include Radiography of field joints, bend test, etc as specified. as per Specification and Drawings.								
а	1700 mm ID 12 mm thick	m	380						
ь	1500 mm ID 16 mm thick for Pumping mains	m	2,030						
С	1500 mm ID 10 mm thick for Transmission mains	m	1,190						
d	1400 mm ID 10 mm thick	m	1,030						
е	1200 mm ID 10 mm thick	m	500						
f	1000 mm ID 8 mm thick	m	1,770	:					
ûð	900 mm ID 8 mm thick	m	3,115						

	3.02	р	0	n	m		*	j.	1:	i i i			
	Providing, and Supplying of All types of MS specials such as tees, tapers, tail pieces, man hole covers, bearing plates, flanges, for MS pipe to MS pipe connection, valve connections, MS Anchor bolts, Straps, Air vent pipe of diffrent dia and dismentling joint etc of various sizes, manufactured from Fe 410 grade MS plates having thickness not less than the pipes with standard flanges not less than 16 mm thick wherever required complete in all respect as per specification and Drawings including loading, transportation to work site, unloading and stacking, etc complete with cost of third pary inspection, all the material and labour, taxes and duties for all leads and lifts involved. Negative tolerance will not be allowed in respect of the thickness of MS specials. Unit Rate shall include lining and coating.	150 mm ID 5 mm thick For washout	250 mm ID 5 mm thick For washout	300 mm ID 5 mm thick For washout	500 mm ID 6 mm thick	600 mm ID 6 mm thick for railway croosing	700 mm ID 6 mm thick	800 mm ID 6 mm thick	900 mm ID 8 mm thick	Description			
TM		m	m	m	m	m	m	m	m		T7		Bill of Q
171		30	30	30	3,345	10	8,720	7,700	3,115	Quality			Bill of Quantities
										Basic Rate	Lo		
										e taxes and duties etc.	Local	Rate	
											Foreign		
										Basic Rate	L		
										e taxes and duties etc.	Local	Amount	
											Foreign		

		Bill of Q	Bill of Quantities		Rate			Amount
				Lo	Local	Foreign	Lo	Local
Item No.	Description	Unit	Quantity	Basic Rate	Applicabl e taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.
2.05	Structural steel work in single section fixed with connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete above plinth level upto 4.5 meter height in R.S. joist flats, tees, angles and channels.	TM	5					
		SUB T	SUB TOTAL			:		
3.0	Pipelines, Specials and Appurtenances							
2								T
3.01	Providing, Supplying and fabricating spirally welded MS pipes of following internal diameters and thicknesses as per Specifications and as per IS 2062, IS 3589 and IS 5504. The							
	rate shall include all local and central taxes, Third party inspection, transportation, freight charges, loading and unloading, conveyance to site and stacking the same, cost of all							
	labour, material and giving satisfactory testing as per technical specifications. complete in all respects as per Specifications and Drawings. Unit Rate shall include lining and coating.							
ಬ	1700 mm ID 12 mm thick	m	380					
ь	1650 mm ID 20 mm thick	m	30					
С	1500 mm ID 16 mm thick for Pumping mains	m	2,030					
р	1500 mm ID 10 mm thick for Transmission mains	m	1,190					
е	1400 mm ID 10 mm thick	m	1,030					
f	1200 mm ID I0 mm thick	m	500					
ŰQ	1200 mm ID 20 mm thick	m	30					
h	1000 mm ID 8 mm thick	m	1,770					

Guwahati Water Supply Project (JICA Loan No. ID-P201)

Addendum No. 5 (Contract No. C-04) South Central Zone

Dated: November, 26nd 2010

Item 1: Changes in Road Reinstatement Specification

- 1. Section VI Technical Specifications. Delete Paragraph 4.12 Road Reinstatement, in its entirety and replace it with the Specifications attached to this Addendum No 5.
- 2. The details (Drawings) of the WBM / Asphalt road reinstatement for the transmission mains are attached to this Addendum No 5

Item No 2: Changes in the Transmission Main Bill-of-Quantity

- Page 3 of 15: Item 1.06 WBM Base for restoration of Existing Asphalt Road.
 Delete the Description, Unit and Quantity in Bill-of Quantities in Addendum No 2 and replace it with the Description, Unit and Quantity in this Addendum No 5.
- Page 4 of 15 Bituminous Surface for Restoration of Existing Asphalt Road.
 Delete the Description, Unit and Quantity in Addendum No 2 and replace it with the Description, Unit and Quantity in this Addendum No 5.

Item No 3: Change of Bid Security (Bank Guarantee) Form

Section IV Bidding Forms. Remove the Bidding Forms in the original document issued and replace it with the Bid Security (Bank Guarantee) form included with this Addendum No 5.

Item No 4: Changes in Bill-of-Quantities

Narakasur Pumping Station

- 1. Page 10 of 15: Item 2.08. Add the Unit as 'Lump Sum' and the Quantity as '1' (One)
- 2. Page 10 of 15: Item 2.09. Add the Unit as 'Each' and the quantity as '1' (One)

Ramsa Hill 2 Reservoir

- 3. Page 6 of 13: Item 1.21. Delete '1' in Quantities column
- 4. Page 7 of 13: Item 1.26. Delete 'LS' in Unit column and '1' in Quantities column
- 5. Page 7 of 13: Item 1.27. Delete 'LS' in Unit column and '1' in Quantities column

Sonaghali Reservoir

- 6. Page 9 of 15: Item 1.29. Delete 'LS' in Unit column and '1' in Quantities column
- 7. Page 9 of 15: Item 1.30. Delete 'LS' in Unit column and '1' in Quantities column

Narakasur Reservoir

8. Page 9 of 15: Item 1.29. Delete 'LS' in Unit column and '1' in Quantities column

Amiya Naggar Reservoir:

9. Page 9 of 15: Item 1.28. Delete 'LS' in Unit column and '1' in Quantities column

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10. Page 9 of 15: Item 1.29. Delete 'LS' in Unit column and '1' in Quantities column

Geeta Nagar 1 Reservoir:

- 11. Page 9 of 16: Item 1.29. Delete 'LS' in Unit column and '1' in Quantities column
- 12. Page 9 of 16: Item 1.30. Delete 'LS' in Unit column and '1' in Quantities column

Geeta Nagar 11 Reservoir:

- 13. Page 9 of 16: Item 1.34. Delete 'LS' in Unit column and '1' in Quantities column
- 14. Page 9 of 16: Item 1.35. Delete 'LS' in Unit column and '1' in Quantities column

Item No 5: The last date of submission of the Bids is extended to 16 December 2010. The time of bid submission and opening of Technical Bids remains the same as specified in the bidding document.

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4.12 Road Reinstatement

General

The existing WBM, Asphalt and Concrete roads will be damaged during excavation for laying transmission mains. The roads shall be reinstated to original condition immediately after laying, jointing hydraulic testing of pipelines and refilling of the pipeline trenches is completed. The existing WBM roads shall be reinstated with GSB & WMM surface and the concrete and asphalt roads shall be reinstated with asphalt road surfacing with GSB & WMM base.

WBM road

Reinstatement with WMM shall be in 2 layers as specified below.

Granular sub-base

The granular sub-base shall be of 150 mm compacted thickness and shall consist of close graded grading-I material as shown under table 400.1 of PWD Assam Schedule of Rates for 2009-10. The material shall be mixed in a mechanical mix plant at OMC. The item covers carriage of the material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with roller to achieve the desired density. The item shall be executed as per MoSRT&H specification No. 401 as referred in PWD Assam Schedule of Rates 2009-10.

Wet Mix Mecadam

Over the Granular sub-base a layer of Wet Mix Mecadam for 250 mm compacted thickness with graded stone aggregate shall be provided. The work shall cover premixing the material with water at OMC in mechanical mix plant, carting of the material to work site, laying in uniform layers on well prepared surface and compacting with vibratory roller to achieve the desired density. The item shall be executed as per MoSRT&H specification No. 406 as referred in PWD Assam Schedule of Rates 2009-10.

Asphalt road

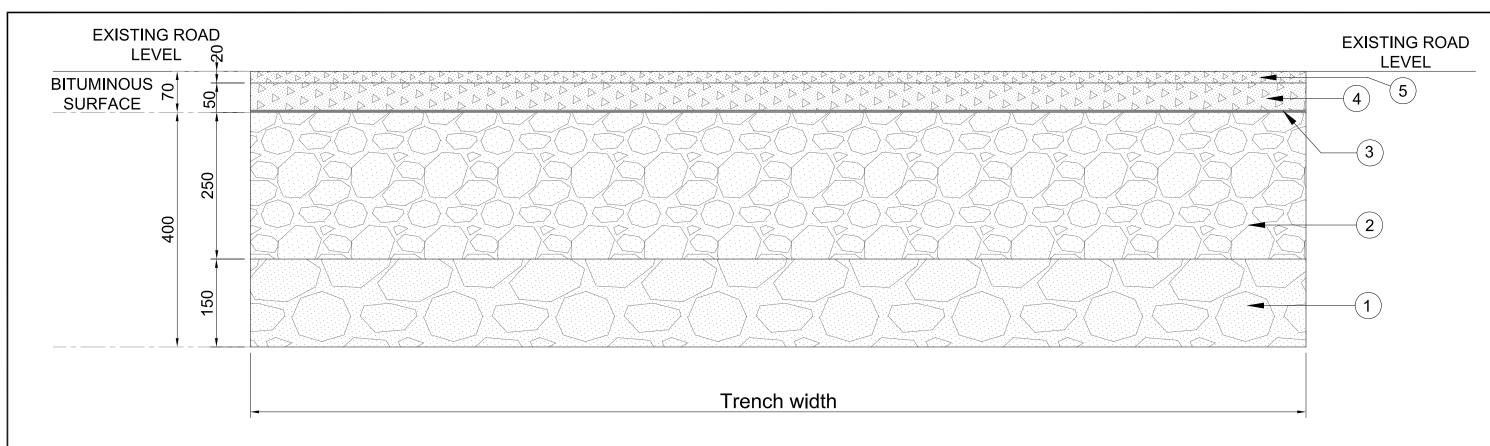
Reinstatement with asphalt surfacing shall be carried out as detailed below.

Tack coat

A Tack coat consisting of bitumen emulsion (for normal bitumen surface) using emulsion pressure distributor at the rate of 0.20 kg per square metre on the prepared granular surface, cleaned with mechanical broom shall be provided over WMM surface. The item shall be executed as per MoSRT&H specification No. 503 as referred in Schedule of Rates 2009-10.

Bituminous Mecadam layer

After applying tack coat, a layer of bituminous macadam without anti stripping agent with 60 / 70 or VG-30 grade paved bitumen with grading-I aggregate (40 mm nominal size), shall be provided for 50 mm compacted thickness. This includes preparation of bituminous macadam with 100-120 TPH hot mix plant using crushed aggregates of grade specified above and premixed with bituminous binder, carriage to the work site, spreading and compacting as directed. The item shall be executed as per MoSRT&H specification No. 504 as referred in PWD Assam Schedule of Rates 2009-10.



	REFERENCE
1	Granular Sub-base with close graded grading-I material as per Table 400.1 of PWD Assam schedule of road for 2009-10 (MOSRTSH Specification 401)
2	Wet Mix mecadam with graded stone aggregate (MOSRTSH Specification 406)
3	Bitumen emulsion Tack coat for normal Bituminous surface (MOSRTSH Specification 503)
4	Bitumen mecadam grading-I without anti-stripping agent with 60/70 or VG-30 grade paved Bitumen (MOSRTSH Specification 504)
5	Pre-mix carpet with anti-stripping agent as per IS:14982 TYPE-B (MOSRTSH Specification 512)

Consultants:

PROJECT MANAGEMENT CONSULTANT (PMC)

1st Bylane Lichubari, Near Ganesh Mandir H.S. School Six Mile, Khanapara Guwahati - 781022 Tel: +91 361 2360077, 2363123



STC

Project

Client:

GUWAHATI METROPOLITAN DEVELOPMENT AUTHORITY
(GMDA)

STATFED Building, Bhangagarh, GMCH Road,
Guwahati-5, Assam

GUWAHATI WATER SUPPLY PROJECT (GWSP)

(JICA ODA LOAN PROJECT: ID P-201)

	3			Approved by:		ſ
	2			Checked by:	N.N. MAHAJAN	
	2			Drawn by:	A. BARMAN	
	1			Design by:	N.N. MAHAJAN	
	0	Oct-2010	Final- for Tendering purpose	Scale:	Rev:	
	REV NO.	DATE	REMARKS	NTS	0	
ı			· · · · · · · · -	I		i

Title:

STANDARD DRAWING FOR REINSTATEMENT OF WBM / ASPHALT ROAD

Drawing No. **GWSP/C#04/Tr-SD/26**

Sheet No: **26 of 61**

file name: D:MNS\Mr. Mahajon\Contract # 4\Transmitton Plan & LS\CONTRACT 4 Transmission Drawings (FINAL)\Contra

Premix carpet

Top layer of premix carpet shall be of 20 mm compacted thickness. The premix carpet shall consist of close graded premix surfacing / mixed seal surfacing with material of type-B as per PWD specifications with anti-stripping agent as per IS: 14982. Mixing shall be with mechanical means using HMP of appropriate capacity. The work covers carting of the material to work site, spreading and rolling as directed. The item shall be executed as per MoSRT&H specification No. 512 as referred in PWD Assam Schedule of Rates 2009-10.

The work shall cover all the costs for testing of the material at site and laboratory as directed. The width for payment of road reinstatement shall be restricted to allowable width for pipeline excavation. Reinstatement of roads for extra width over the allowable shall have to be carried out by the contractor without any extra cost.

Form of Bid Security (Bank Guarantee)

Bene	eficiary:
Date	:
BID (GUARANTEE No.:
We I	have been informed that (hereinafter called "the Bidder") has nitted to you its bid dated (hereinafter called "the Bid") for the execution of under Invitation for Bids No ("the IFB").
	permore, we understand that, according to your conditions, bids must be supported by a bid antee.
sum (amo upon is end	e request of the Bidder, we hereby irrevocably undertake to pay you any or sums not exceeding in total an amount of (amount in figures)) unt in words) () receipt by our office/branch (Name of issuing Bank at Guwahati, Assam, India where this guarantee cashable / payable) of your first demand in writing accompanied by a written statement stating that
(a)	has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
(b)	having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement or (ii) fails or refuses to furnish the performance security, in accordance with the ITB.
contra Bidde notific	guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the act signed by the Bidder and the performance security issued to you upon the instruction of the er; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your cation to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the ation of the Bidder's bid.
	sequently, any demand for payment under this guarantee must be received by us at the office on or re that date.
This	guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.
[signa	ature(s)]

	<u> </u>	Bill of Q	uantities						
				<u> </u>	Rate	T		Amount	т.
Item No.	Description	Unit	Quantity	Basic Rate	Applicabl e taxes and duties etc.	Foreign	Basic Rate	Applicabl e taxes and duties etc.	Foreign
1.04	Filling in pipeline trenches, foundation, chambers etc. with approved excavated soil (excluding rock) including depositing in layers not exceeding 200 mm in depth, consolidating each deposited layer by ramming and watering including lead up to 50m and lift upto 4.5m, including compaction to achieve 90% Standard Proctor density etc., complete	m ³	99398						
1.05	Filling in plinth, trench with well graded river sand including watering, ramming, consolidating and dressing complete including cost of sand as per drawing and specifications around pipe to achieve Class N bedding. For soft Rock	m ³	11044.22						
1.06	SubBase & Base for restoration of existing asphalt/WBM road								
	Providing and constructing granular sub-base with close graded grading-I material for 150 mm compacted thickness and wet mix mecadam with graded stone aggregate for 250 mm thickness including premixing the material with water at OMC in mechanical mixing plant, carting to work side, spreading and compacting etc complete for all leads and lifts as per drawing and specifications		56883						

	Bill of Q	uantities						
				Rate			Amount	
			Local		Foreign	Local		Foreign
Description	Unit Quantity		Basic Rate	Applicabl e taxes and duties etc.		Basic Rate	Applicabl e taxes and duties etc.	
Bituminous surface for restoration of existing asphalt road								
bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix	m^2	45506						
Concrete and Allied Works								
Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate	m^3	10.54						
	Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Description Unit Quantity Basic Rate Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Description Unit Quantity Description Unit Quantity Description Unit Quantity Description Unit Quantity Applicable e taxes and duties etc. Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Description Unit Quantity Description	Description Unit Quantity Basic Rate Local Applicabl Basic Rate Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with material of type-B for 20 mm compacted thickness with mechanical means using HMP of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per	Description Unit Quantity Basic Rate Applicabl e taxes and duties etc. Bituminous surface for restoration of existing asphalt road Providing and constructing Asphalt road consisting of providing and applying tack coat over WMM surface with bitumen emulsion (for normal bitumen surface), providing and laying bituminous mecadam with 100-120 TPH hot mix plant using crushed aggregates of grading-I material for 50 mm compacted thickness, and providing close graded premix surfacing with metahnical means using HMD of appropriate capacity, including transportation, spreading to required grade, rolling etc complete for all leads and lifts, as per the drawing and specifications. Concrete and Allied Works Providing and laying Plain cement concrete M-15 grade PCC for all types of Valve chamber, thrust block, anchor block, antiflotation block etc vibrating mix with respect with vibrations complete in all respect with 40mm/25 stone aggreate (crusher broken) including fine finish of surface to required camber / super elevation and grade including curing as per

Pumping Station at NARKASUR (Revised November 4, 2010)

Item No.	Description	Unit			Rate			Amount	
			Quantity	Local		Foreign	Local		Foreign
			Quantity	Basic Rate	Applicable taxes and		Basic Rate	Applicable taxes and	
2.07	Supply and Install Split Unit Air Conditioning for Control Room. Cooling Capacity should not be less than 20,000 BThU/Hr. Operating Voltage 230V	Each	1						
2.08	Washout to Manhole								
	Supplying, installing,300 mm MS pipe from Surge bypass to manhole. Cost shall include connection to the 300 mm pipe all fittings, all valves, flanges, bends, tees, couplings, reducers enlargers, nuts, bolts and gaskets, sleeve coupling, etc and connecting to the manhole.	LS	1						
			ļ						
2.09	Supply and Install hydrant . Cost shall include excavation, bedding, backfill, pipes, fittings, valves, valve box and all other items to complete installation.	Each	1						
		SUB	TOTAL						
3.00	Electrical & Instrumentation Work								
	ELECTRICAL WORKS FOR PUMPS: Manufacturing, Testing at shop floor, Supply, Installation including related civil work like Transformer Base etc, Testing and Commissioning at site the following Items / Systems as per Tender Specification to be located in the Fields and the Control Room.								
3.01	GOD/DO along with CT, PT units for metering, ACSR Cunductors, Insulaters along with required accessories as per REC standards	Set	1						
3.02	Providing , Laying, Terminations with Lugs and Glands of 11kV grade 3C X 120mm ² XLPE, aluminum armoured cable	m	30						
3.03	500kVA Power Transformer with Off-Circuit Tap changer 11kV /0.433 kV including Transformer Base	Nos.	2						

Guwahati Water Supply Project (JICA Loan No. ID-P201)

Addendum No. 6 (Contract No. C-04) South Central Zone

Dated: December, 2nd 2010

Item No 1. Changes to Bill-of-Quantities Access Road.

Replace the Bill-of-Quantities for the Access Road issued previously with Addendum No. 2 with the revised Bill-of-Quantities included in this Addendum No. 6.

Item No 2. Geotechnical Information

The PDF File of existing Geotechnical information for the transmission route and the reservoir site is attached to this Addendum No 6. Bidders should also refer to 'Geotechnical Information' in Section VIA Technical Specifications Subsection 9, page 1 of 15.

GWSP/C-04

			Bill of Quantitie	-3							
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
CONST	RUCTION	OF ROAD SI	DE STONE MASONRY OPEN DRAIN								
Name	of Road:	Approach Roa	ad At Amiyanagar			•		•			•
Length	of Road	= 1222.933 m									
			Foundation:								
1	12.1	304									
			Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material.								
	1		Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto 3 m height	m^3	2390.83						
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical specification	m ³	528.31						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1693.76						
4	12.4		PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	96.00						

			Bill of Quantitie		1	1					1
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Sub structure								
5	13.5	1500, 1700 & 2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m³	73.38						
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m^3	1248.31						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in sub-structure as per Technical Specifications	m²	2384.72						
8	13.9	710.1.4 of IRC:78 & 2200	Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m³	91.72						
			Sub total								
ROAD	WORKS										
Name	of Road	: Approac	h Road At Amiyanagar				!				
		d = 1222.9	933 m								
		SITE CLEA	RENCE								
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	40						
			(-) 5		40					l	1

							Rate			Amount	
		Reference of				Local		Foreign	I	Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n		Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Classics and Coulding Daniel and								
			Clearing and Grubbing Road Land:								
10	2.3		Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness.								
			I) By Manual Means								
			A) In area of non thorny jungle	Hect	0.49						
			Discoverables of Champions								
11	2.4		Dismantling of Structures Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres								
			I) Lime / Cement Concrete								
			A) By Manual means								
			a) Lime Concrete, cement concrete M10 grade and below	m³	0.50						
			III) Dismantling Stone Masonry	3							
-			b) Rubble Masonry in cement mortar	m³	15.00						

							Rate			Amount	
		Reference of				Local		Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	io	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	tayes and	
			EARTHWORK, EROSSION CONTROL AND DRAINAGE								
			Excavation in Soil with Dozer with lead upto 100 m								
12	3.3		Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	m³	32698.94						
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m³	27545.88						
			Embankment Construction with Materials obtained from Roadway Cutting								
14	3.17		Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	m³	5153.06						

			Bill of Quantitie								
							Rate			Amount	
		Reference of				Local		Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	io	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
SUB-	BASES, B	ASES (NO	N-BITUMINOUS) AND SHOULDERS								
			Sub-Base								
15		Analyzed Item Annexure II	Construction of sub-base coarse 150 mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm (loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same with hower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position	m³	733.76						

			bili of Quantitie	<i>.</i>				1			
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
16	4.9	404	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								
			(A) By Manual means.								
			I) Grading-II								
			(b) Using Screening Type-A (13.2 mm Agg.)	m ³	489.17						-
			II) Grading-III								
			(a) Using Screening Crushable type such as Moorum or Gravel	m ³	366.88						
BASES	& SURF	ACE COURSE	ES (BITUMINOUS)								
17	5.1A	502	Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h	m^2	4891.73						
18	5.2	503	Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m^2	4891.73						

			Bill of Quantitie				Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
19	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			a) Without anti-stripping agent								
			I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m^2	4891.73						
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								

							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No. I	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
20	5.12	513	a) Without anti-stripping agent								
	02		I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m²	4891.73						
CDOCC	DDATNA	CE WORKS	Sub total								
			(DOUBLE CELL BOX CULVERT 3m x 3m)								
		= 1222.933	Road At Amiyanagar								
Length	OI KOAU		Foundation								
21	12.1		Excavation for Structures								
			Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m^3	22.70						
22	12.8A	2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification								
			N, Without Plasticiser								
			A P.C.C. grade M15	m ³	2.78						
			C. R.C.C. Grade M20								
			CASE I Using Concrete Mixer	m ³	3.60						
20	10.4	1500									
23	12.4		Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.36						

			Bill of Quantitie				Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Substructure								
24	13.5A	1500, 1700 & 220	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
			N, Without Plasticiser								
			E. RCC M20 grade								
			a. height upto 5 m								
			CASE I Using Concrete Mixer	m ³	16.11						
	40.60	1500 0 2200									
25	13.6B	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	1.61						
26	13.10	710.1.4 of IRC:78 & 2200	Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification	m³	14.40						
			Compare to the compar								
27	14.1		Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework								
			N, Without Plasticiser								
			A RCC m20 grade								
			CASE I Using Concrete Mixer								
			I) FOR SOLID SLAB	_ 3							
			(p) Height upto 5 m	m ³	8	ļ	<u> </u>			L	ļ

		1	Bill of Quantitie	25	1						
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.84						
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m³	16						
			Sub Total								
CROS	S DRATNA	GF WORKS	(BOX CULVERT 1.5m x 1.5m)								
			Road At Amiyanagar								
		= 1222.93									
			Foundation								
30	12.1	3.4	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m ³	77.19						
31	12.8 A	1500, 1700 & 2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification								
			N, Without Plasticiser								
			A P.C.C. grade M15	m ³	6.60						
			C. R.C.C. Grade M20 CASE I Using Concrete Mixer	m³	27.00						
			Store I coming controlled in India	•••	200						
32	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	2.70						
	•					•					•

		1	Bill of Quantitie	:5	1	1					
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
20	40.5.4	4500 4700 8	Substructure								
33	13.5 A	2200	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
			N, Without Plasticiser								
			E. RCC M20 grade a. height upto 5 m								
			CASE I Using Concrete Mixer	m ³	38.85						
			CASE I Using Concrete Plixer		00.00						
34	13.6 (B)	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	3.885						
35	13.10		Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification	m³	54.00						
36	14.1	1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer								
			I) FOR SOLID SLAB			1					<u> </u>

37 38		Reference of MoSRT&H Specificatio n	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
37	14.2	Specificatio n	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications	Unit	Quantity		taxes and			taxes and	
		1600	including splicing complete as per drawing and technical specifications								
38	14.9										
38	14.9		c With other make ISI marked TMT rebars	Tonne	1.00						
30		2705	Drainage spout complete as per drawing & Technical specification	m³	32.00						
			Sub Total								
CONSTR	RUCTION	N OF ROAD	SIDE STONE MASONRY BREAST WALL								
Name of	f Road:	Approach I	Road At Amiyanagar								
Length o	of Road	= 1222.93	3 m								
			Foundation								
39	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	ı		Ordinary Soil								
	Α		Manual Means								
	a i		Without Dewatering upto a height of 3m	m ³	5,299.83						
	ı		upto a neight of 3111	111	5,233.03						
40	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete. (c).Stone soling 150mm thick	m²	1.000.35						

							Rate			Amount	
<u>.</u>		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
41	12.4		PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	150.05						
			Sub-Structure								
42	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	2,589.20						
43	13.2	1300 & 2200	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	1,692.90						
44	13.8		Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	1,504.00						
45	13.10		Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa	m ³	202.50						
			Sub Total								

			Bill of Quantitio	<u> </u>							
							Rate			Amount	
		Reference of					Local	Foreign		Local	Foreign
Sr No.	Item no.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
CONS	TRUCTIO	OF ROAD	SIDE STONE MASONRY TOE WALL (1.5m HEIGHT)								
			Road At Amiyanagar								
Lengt	h of Road	= 1222.93									
			Foundation								
46	12.1		Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	V		Ordinary Soil								
	Α		Manual Means								
	ii		With dewatering	m ³	2,017.37						
47	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m²	627.00						
48	12.4		PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	62.70						
49	13.1		Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			a. Random Rubble Masonry	m³	925.77						
50	13.2		Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	577.50						
			Sub Total								
			Total		l						

			Bill of Quantit	ies							
							Rate			Amount	
	Item	Reference of					Local	Foreign	ı	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
CONST	RUCTI	ON OF ROAD S	SIDE STONE MASONRY OPEN DRAIN								
			coad At Geeta Mandir (Main Reservoir)								
		ad = 253.463 i									
			Foundation								
1	12.1	304									
			Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I		Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto 3 m height		811.0855125						
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical specification	m ³	145.760295						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ³	485.86765						
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		29.778985						

							Rate			Amount	
	Item	Reference of				ı	Local	Foreign	I	_ocal	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Sub-Structure								
5	13.5	1500, 1700 & 2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m ³	18.80778						
6	13.4		Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	550.127565						
7	13.3		Plastering with cement mortar (1:3) on brick work in sub-structure as per Technical Specifications	m²	783.6575						
8	13.9		Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m ³	23.509725						
				SUB	TOTAL						

		1	Bill of Quantit	ies					1		
							Rate	Foreign		Amount	Foreign
	Item	Reference of					Local	loreign		Local	loreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
ROAD	WORK										
		d: Approach R	oad At Geeta Mandir (Main Reservoir)			ı	1	ı			
Lengtl	h of Ro	ad = 253.463 ı	m								
			SITE CLEARENCE					_			
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	40						
			Clearing and Grubbing Road Land:								
10	2.3	201	Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness.								
			I) By Manual Means								
			A) In area of non thorny jungle	Hect	0.10						
			r y in a ca critical and my jangle								
			Dismantling of Structures								
11	2.4	202	Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres								
			I) Lime / Cement Concrete			<u> </u>	1			1	
			A) By Manual means	m ³	0.5						
			a) Lime Concrete, cement concrete M10 grade and below								
			III) Dismantling Stone Masonry								
			b) Rubble Masonry in cement mortar	m ³	15						

							Rate			Amount	
	Item	Reference of				I	Local	Foreign	L	ocal	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			EARTHWORK, EROSSION CONTROL AND DRAINAGE	ı		1	T	ı			1
12	3.3		Excavation in Soil with Dozer with lead upto 100 m Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	m³	10675.09						
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11		Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m³	10586.80						
			Embankment Construction with Materials obtained from								
14	3.17		Roadway Cutting Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	m³	88.29						

		1	Bill of Quantit	ies							
							Rate			Amount	
	Item	Reference of				ı	Local	Foreign	I	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			CUR DAGES PAGES (NON DETUNENCIA) AND CHOUR DEP								
			SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS	<u> </u>	1	ı				1	
			Sub-Base								<u> </u>
15		Analyzed Item Annexure II	Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm(loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same wit hpower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position.	m³	155						
			Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								

_		1	Bill of Quantit	162	1	1					
							Rate			Amount	
	Item	Reference of				I	Local	Foreign	I	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
16	4.9	404	(A) By Manual means.								
			I) Grading-II								
			(b) Using Screening Type-A (13.2 mm Agg.)	m³	101.3852						
			II) Grading-III								
			(a) Using Screening Crushable type such as Moorum or Gravel	m³	76.0389						
			BASES & SURFACE COURSES (BITUMINOUS)								
17	5.1A		Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h	m²	1013.85						
18	5.2	503	Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m ²	1013.85						

			Bill of Quantit				Rate			Amount	
	Item	Reference of				ı	Local	Foreign	L	_ocal	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
19	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			a) Without anti-stripping agent								
			I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m²	1013.85						
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								

			Bill of Quantit	ies							
						Rate Local				Amount	
	Item	Reference of	RH Description Unit				Local	Foreign	I	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
20	5.12	513	a) Without anti-stripping agent								
20	5.12		I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry) Sub Total	m^2	1013.85						
CBOSS	DDATA		BOX CULVERT)								
			oad At Geeta Mandir (Main Reservoir)								
		ad = 253.463 r									
21	12.1	304	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m^3	102.97						
22	12.8 A		Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser								
			A P.C.C. grade M15	m^3	3.24						
			C. R.C.C. Grade M20								
			CASE I Using Concrete Mixer	m ³	7.29						
23	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.73						

Second No. N		1	1	Bill of Quantit	162	1						
Sr no. N								Rate			Amount	
Sectification Substructure Sub		Item						Local	Foreign	ı	Local	Foreign
13.5 A 1500,1700 & 2000 Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1.204 N, Without Plasticiser E. RCC M20 grade a. height upto 5 m cASE I Using Concrete Mixer m² 20.04	Sr no.			Description	Unit	Quantity	Basic	taxes and			taxes and	
drawings & technical specification Clause 802, 805, 807, 1202 & 1204 N, Without Plasticiser E. RCC M20 grade a. helight upto 5 m CASE I Using Concrete Mixer Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications c With other make ISI marked TMT rebars Tonne 2.00 710.1.4 of IRC.78 8 2200 MRRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification in a full formation of the super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PAE or equivalent), and acclerating plasticier (Masterplast PAE or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer J POR SOLD SLAB				Substructure								
E. RCC M20 grade a. helolt byto 5 m CASE I Using Concrete Mixer 25 13.6 (8) 1600 & 2200 Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications c With other make ISI marked TMT rebars Tonne 2.00 26 13.10 710.1.4 of IRC.78 & 2200 770.1.4 of IRC.78 & 2200 MRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification including specification in super-structure as per drawing and Technical Specification including providing posticier (Masterplast PL - 1/SPL - 2 or equivalent), air entraining and water reducing plasticier (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N. Without Plasticiser A RCC M20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB	24	13.5 A		drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
a. height upto 5 m CASE I Using Concrete Mixer 25												
CASE I Using Concrete Mixer 25												
25 13.6 (8) 1600 & 2200 Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications c With other make ISI marked TMT rebars Tonne 2.00 26 13.10 710.1.4 of IRC:78 & 2200 MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification 27 14.1 1500,1600 & 1700 Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB					m ³	20.04						+
complete as per drawing and technical specifications c With other make ISI marked TMT rebars Tonne 2.00 710.1.4 of IRC:78 8.2200 Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification Superstructure Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - I/SPL - 2 or equivalent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) conforming to IS-9103-1999 and steel shuttering framework N. Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB				CASE I Using Concrete Mixer	III	20.04						
c With other make ISI marked TMT rebars Tonne 2.00 13.10 710.1.4 of IRC:78 & 2200 Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the soil & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification Superstructure Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticier (Masterplast PAE or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB	25	13.6 (B)										
aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification Superstructure Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticier (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB					Tonne	2.00						
aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification Superstructure 27 14.1 1500,1600 & 1700 Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivalent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticier (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB												
14.1 1500,1600 & 1700 Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB	26	13.10	& 2200	aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical		28.80						
14.1 1500,1600 & 1700 Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB				Superstructure								
A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB	27	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework								
CASE I Using Concrete Mixer I) FOR SOLID SLAB						-						
I) FOR SOLID SLAB												
						1	 					
				(p) Height upto 5 m	m ³	7.50						

			Bill of Qualitie								
						Rate				Amount	
	Item	Reference of				ı	Local	Foreign	ı	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.75						
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m ³	24.00						
			Sub Total								
••••		• · · · · · · · · · · · · · · ·	IDE STONE MASONRY BREAST WALL								
			oad At Geeta Mandir (Main Reservoir)								
Lengti	h of Ro	ad = 253.463 r									
			Foundation								
30	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	1		Ordinary Soil								
	Α		Manual Means						-		
	a		Without Dewatering								
	i		upto a height of 3m	m ³	1884.38						

			Bill of Quantit	103							
						local				Amount	
	Item	Reference of				I	Local	Foreign	I	Local	Foreign
Sr no.	No.	MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
31	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m²	355.68						
32	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		53.35						
			Curlo Churreshama								
33	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	920.60						
34	13.2		Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	601.92						
35	13.8	2200 & 2706	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	540						
36	13.10	710.1.4 of IRC:78 & 2200	Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa		72						
			Sub Total Total								

			Bill of Quantities				Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Dasic	Applicable taxes and duties etc.	roreign	Basic Rate	Applicable taxes and duties etc.	Foreign
CONS	TRUCTI	ON OF ROAD SIDE	STONE MASONRY OPEN DRAIN								
Name	of Roa	d: Approach Road	At Geetanagar (Sub Reservoir)								
		ad = 698.339 m									
			Foundation								
1	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	1		Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto 3 m height	m^3	2339.51						
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical specification	m ³	516.96						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1657.40					-	

			Bill of Quantities				Rate			Amount	
						I	_ocal			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m ³	93.94						
			Sub-Structure								
5	13.5		Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m³	71.80						
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	1221.51						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in sub-structure as per Technical Specifications	m²	2000 50						
				m-	2333.52						
8	13.9		Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m ³	89.75						
			SUB TOTAL								

			bill of Qualitities				Rate			Amount	
							_ocal			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
Road	works										
Name	of Roa	d: Approach Road	At Geetanagar (Sub Reservoir)		•						
Lengt	h of Ro	ad = 698.339 m									
			SITE CLEARENCE			1					
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit	0							
			(I) Girth from 300 mm to 600 mm	each	80						
			Clearing and Grubbing Road Land:								
10	2.3	201	Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness.								
			I) By Manual Means								
			A) In area of non thorny jungle	Hect	0.28						

			bill of Qualitatics				Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			Dismantling of Structures								
11	2.4	202	Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres I) Lime / Cement Concrete A) By Manual means a) Lime Concrete, cement concrete M10 grade and below III) Dismantling Stone Masonry b) Rubble Masonry in cement mortar		0.50						
			EARTHWORK, EROSSION CONTROL AND DRAINAGE		1		1		ı	I	
12	3.3	301	Excavation in Soil with Dozer with lead upto 100 m Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	m³	17510.54						

							Rate			Amount	
							Local			Local	
Sr no.		Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m³	14008.43						
			Embankment Construction with Materials obtained from Borrow Pits	v							
14	3.16	305	Construction of embankment with materials obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 (including compensation of earth) (Including cost of testing of materials at site and laboratory as directed by the deptt.)								
			(b) from Govt. Land	m³	4843.68						
15	3.17		Embankment Construction with Materials obtained from Roadway Cutting Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	m³	3502.11						

6		Bill of Quantities				Rate		Amount	
						Local		Local	
Sr Item no. No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Applicable taxes and duties etc.	Foreign
		SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS		1		1		1	
16	Analyzed Item Annexure II	Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm(loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same wit hpower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position	m³	419.00					

			bill of Qualitaties				Rate			Amount	
							_ocal			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
17	4.9	404	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km) (A) By Manual means. I) Grading-II (b) Using Screening Type-A (13.2 mm Agg.) II) Grading-III (a) Using Screening Crushable type such as Moorum or Gravel		279.34 209.50						
			BASES & SURFACE COURSES (BITUMINOUS)								
18	5.1A	502	Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)	m^2	2793.36						

							Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description n	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			I)With bitumen emulsion-CSS-1h								
19	5.2	503	i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m^2	2793.36						
20	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								

			Bill of Quantities		T						
							Rate	ı		Amount	
		D-f					Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			a) Without anti-stripping agent								
			I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m²	2793.36						
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
21	5.12	513	a) Without anti-stripping agent								
21	5.12	313	I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m^2	2793.36						
			Sub Total								
CROS	S DRAI	NAGE WORKS (BO)	(CULVERT)								
Name	of Roa	d: Approach Road	At Geetanagar (Sub Reservoir)								
Lengt	h of Ro	ad = 698.339 m									
			Foundation								
22	12.1	304	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m ³	171.62						

			bill of Quantities				Rate			Amount	
						I	Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
23	12.8 A	1500, 1700 & 2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser								
			A P.C.C. grade M15	m ³	5.4						+
			C. R.C.C. Grade M20	111	3.4						+
			CASE I Using Concrete Mixer	m ³	12.15						+
			CASE I USING CONCICCE TIME!		12.10						
24	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	1.215						
Sub St	ructure										
25	13.5 A	1500, 1700 & 2200	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
			N, Without Plasticiser								
			E. RCC M20 grade								
			a. height upto 5 m								
			CASE I Using Concrete Mixer	m ³	33.4						
26	13.6 (B)	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	3.34						
								_			

			Bill of Quantities				Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
27	13.10	710.1.4 of IRC:78 & 2200	Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification	m³	48						
			Super Structure								
28	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser								
			A RCC m20 grade								
			CASE I Using Concrete Mixer I) FOR SOLID SLAB (p) Height upto 5 m	m³	12.5						
29	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	1.25			_			
30	14.9	2705	Drainage spout complete as per drawing & Technical specification	m ³	40						
			SUB TOTAL								

			Bill of Quantities				Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
CONS	TRUCTI	ON OF ROAD SIDE	STONE MASONRY BREAST WALL								
Name	of Road	d: Approach Road	At Geetanagar (Sub Reservoir)								
Lengt	h of Roa	ad = 698.339 m	Foundation								
31	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I		OrdinarySoil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto a height of 3m	m³	4710.96						
32	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m²	889.2						
33	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		133.38						

							Rate			Amount	
							Local			Local	
Sr no.	Item No.	Reference of MoSRT&H Specification	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			Sub-Structure								
34	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m^3	2301.51						
35	13.2	1300 & 2200	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m ²	1504.8						
36	13.8	2200 & 2706	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	1340						
37	13.10	710.1.4 of IRC:78 & 2200	Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa	3	180						
			Sub Total								
			Total								

			Bill of Quantitie	: 5			Rate			Amount	
		Reference					Kate _ocal	Foreign	1	Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	roreign	Basic Rate	Applicable taxes and duties etc.	roreigii
Structur	es/Drai	ns									
Name of	f Road:	Approach Roa	nd At Lichubagan								
Length o	of Road :	= 622.127 m									
			Foundation								
1	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I	1	Marshy Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto 3 m height	m ³	1959.16						
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical	3							
			specification	m ³	432.92						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1387.95						
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	78.67						

	ı		Bill of Quantitie	es	1	ı	D-t-			A	
		Reference					Rate Local	Foreign		Amount Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	roreign	Basic Rate	Applicable taxes and duties etc.	roreign
Sub stru	icture										
5	13.5	1500, 1700 & 2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m³	60.13						
-	12.4	1400 & 2200									
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	1022.92						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in substructure as per Technical Specifications	m²	1954.15						
8	13.9	710.1.4 of IRC:78 & 2200	Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m ³	75.16						
			Sub Total								
ROAD W											
			nd At Lichubagan		1	T		T			
Length (of Road	= 622.127 m									
			SITE CLEARENCE								
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	50						
			(II) Girth from 600 mm to 900 mm	each	20						
			(III) Girth from 900 mm to 1800 mm	each	5						

			bin or Quantities				Rate			Amount	
		Reference				I	ocal	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Clearing and Grubbing Road Land:								
10	2.3	201	Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness.								
			By Manual Means A) In area of non thorny jungle	Hect	0.25						
11	2.4	202	Dismantling of Structures Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres								
			I) Lime / Cement Concrete								
			A) By Manual means	3	0.50						
			a) Lime Concrete, cement concrete M10 grade and below III) Dismantling Stone Masonry	m ³	0.50						
			b) Rubble Masonry in cement mortar	m ³	15.00						
			ay read a read and a read a read and a read a read and a read a read and a read a read and a read a								

			Din or Quantities				Rate			Amount	
		Reference					_ocal	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
EARTHV	VORK, EF	ROSSION CON	TROL AND DRAINAGE								
	-		Excavation in Soil with Dozer with lead upto 100 m								
12	3.3	301	Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections		31124.49						
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)		29771.08						
			Embankment Construction with Materials obtained from Roadway Cutting								
14	3.17		Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2		1353.41						

			Bill of Quantitie				Rate			Amount	
		Reference					Local	Foreign		_ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS								
			Sub-Base								
15			Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm(loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same wit hpower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position		373.28						

			Bill of Qualititie				Rate			Amount	
		Reference				ı	ocal_	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	3	Basic Rate	Applicable taxes and duties etc.	
16	4.9	404	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								
			(A) By Manual means. I) Grading-II (b) Using Screening Type-A (13.2 mm Agg.) II) Grading-III (a) Using Screening Crushable type such as Moorum or Gravel	m ³	248.85						
			BASES & SURFACE COURSES (BITUMINOUS)								
17	5.1A	502	Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h	m ²	2488.51						
				-							
18	5.2	503	Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m ²	2488.51						

			Bill of Quantitie				Rate			Amount	
		Reference					_ocal	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
19	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			a) Without anti-stripping agent I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m²	2488.51						
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
20	5.12	513	a) Without anti-stripping agent								
			I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m^2	2488.51						
			Sub Total								

							Rate			Amount	
l l		Reference					Local	Foreign		Local	Foreign
CROSS DRA	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	3	Basic Rate	Applicable taxes and duties etc.	
			OX CULVERT 4 NOS.)								
		proach Road A	At Lichubagan								
Length of	f Road = (622.127 m									
			Foundation								
21	12.1	304	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m ³	130.42						
			(v) a pass of the deposit								
22	12.8 A	1500, 1700 & 2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification								
			N, Without Plasticiser								
			A P.C.C. grade M15	m^3	4.16						
			C. R.C.C. Grade M20								
			CASE I Using Concrete Mixer	m^3	9.36						
23	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super- structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.94						
											<u> </u>
		4500 :====	Substructure								
24	13.5 A	1500, 1700 & 2200	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
			N, Without Plasticiser								
			E. RCC M20 grade								
			a. height upto 5 m	2	00 ==						
			CASE I Using Concrete Mixer	m ³	26.72						

			Bill of Quantitie				Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
25	13.6 (B)	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	2.67						
26	13.10		Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification								
				m ³	48.00						
			Superstructure								
27	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework								
			N, Without Plasticiser								
			A RCC m20 grade								
			CASE I Using Concrete Mixer								
ł			I) FOR SOLID SLAB	3	40.00						
			(p) Height upto 5 m	m ³	10.08			1			

			Bill of Quantitie				Rate			Amount	
		Reference				I	Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	3	Basic Rate	Applicable taxes and duties etc.	3
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super- structure including splicing complete as per drawing and technical specifications c With other make ISI marked TMT rebars	Tonne	1.01						
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m ³	32.00						
			Sub Total								
			DE STONE MASONRY BREAST WALL								
		pproach Road	At Lichubagan								
Length o	f Road =	622.127 m									
30	12.1	304	Foundation Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material Ordinary Soil								
	1	4	Manual Means								
	A	1	Without Dewatering								
	a	1	upto a height of 3m	m ³	6642.45		-				
	1		upto a neight of 3111	m	0042.43		-				
31	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1253.77						

Sr no	Referenc of em MoSRT&I									
Sr no	em					_ocal	Foreign		_ocal	Foreign
	Specificat		Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
32 12	2.4 2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days Sub-Structure	m³	188.07						
33 13	3.1 1300 & 220	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
		A. Random Rubble Masonry	m ³	3245.13						
34 13	3.2 1300 & 220	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	2121.77						
35 13	3.8 2200 & 270	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	1884.00						
36 13.	3.10 710.1.4 of IRC:78 & 220	laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa	m^3	1195.00						
		Sub Total Total								
		। ठरवा								

			Bill of Quant	ities			Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Toreign	Basic Rate	Applicable taxes and duties etc.	Toreign
CON	STRUCT	TION OF RO	AD SIDE STONE MASONRY OPEN DRAIN								
			ch Road At Narakasur Hill								
Leng	th of R	oad = 1894									
			Foundation								
1	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I	1	Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i]	upto 3 m height	m^3	6470.00						
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical specification	m ³	1429.69						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	4583.61						
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		259.79						

			Bill of Quant	100			Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Sub-Structure								
5	13.5	2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m ³	198.57						
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3								
			in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	3378.14						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in sub-structure as per Technical Specifications	m ²	6453.45						
8	13.9	710.1.4 of									
	10.0	IRC:78 & 2200	Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m ³	248.21						
			Sub Total								

			Dill of Qualit								
		D. C					Rate	1		Amount	
		Reference					Local	Foreign	L	Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
ROA	D WOR	KS									
Nam	e of Ro	ad: Approa	ch Road At Narakasur Hill								
		oad = 1894									
			SITE CLEARENCE								
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	40						
			Clearing and Grubbing Road Land:								
10	2.3	201	Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness.								
			I) By Manual Means								
			A) In area of non thorny jungle	Hect	0.76						

			Bill of Quant	ities			Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Dismantling of Structures								
11	2.4	202	Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres								
			I) Lime / Cement Concrete								
			A) By Manual means								
			a) Lime Concrete, cement concrete M10 grade and below	m^3	0.5						
			III) Dismantling Stone Masonry								
			b) Rubble Masonry in cement mortar	m ³	15						
			FARTIWORK FROCCION CONTROL AND DRAINAGE								
			EARTHWORK, EROSSION CONTROL AND DRAINAGE Excavation in Soil with Dozer with lead upto 100 m								
12	3.3	301	Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	m³	172500.921						
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m ³	169676.781						
			Embankment Construction with Materials obtained from								
			Roadway Cutting								
14	3.17		Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	m ³	2824 14						
			300-2	m ³	2824.14						

			Bill of Quant	itics			Rate			Amount	
		Reference					Local	Foreign		_ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			CUR RACES RACES (NON RYTHMTNOUS) AND SHOULDERS								
			SUB-BASES, BASES (NON-BITUMINOUS) AND SHOULDERS Sub-Base								
15		Analyzed Item Annexure II	Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding		1136.84						

			Bill of Quanti	tics			Rate			Amount	
		Reference					Local	Foreign	L	_ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	-	Basic Rate	Applicable taxes and duties etc.	
16	4.9	404	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								
			(A) By Manual means.								
			I) Grading-II								
			(b) Using Screening Type-A (13.2 mm Agg.)	m ³	757.89						
			II) Grading-III								
			(a) Using Screening Crushable type such as Moorum or Gravel	m ³	568.42						
			BASES & SURFACE COURSES (BITUMINOUS)								
17	5.1A	502	Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h	m ²	7578.93						
				· · · · · · · · · · · · · · · · · · ·							
18	5.2	503	Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m^2	7578.93						

Sr Item no. No.	MOSRIAH	Description	Unit			Rate Local	Foreign	L	Amount Local	Foreign
	MoSRT&H Specificati	•	Unit							
no No M				Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	. c. c.g.
19 5.10 A	A 511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
		a) Without anti-stripping agent								
		I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m²	7578.93						
		Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
20 5.12	2 513	a) Without anti-stripping agent I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m²	7578.93						
60066 55	 	Sub Total								
		RKS (BOX CULVERT) Ich Road At Narakasur Hill]	
	Road: Approa f Road = 1894									
Length Of	1 KJau – 1894	Foundation								

							Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	_	Basic Rate	Applicable taxes and duties etc.	
21	12.1	304	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means								
			(i) Upto 3 m depth	m^3	163.03						
22	12.8 A	2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification								
			N, Without Plasticiser	m ³	5.2						
			A P.C.C. grade M15 C. R.C.C. Grade M20	m.	5.2						
			CASE I Using Concrete Mixer	m ³	11.7						
-			CASE I OSING CONCIETE MIXE	111	11.7						
23	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	1.17						

			-				Rate			Amount	
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Substructure								
24	13.5 A	1500, 1700 &	Substructure								
24	13.5 A	2200	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
			N, Without Plasticiser								
			E. RCC M20 grade								
			a. height upto 5 m								
			CASE I Using Concrete Mixer	m^3	33.4						
25	13.6 (B)	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	3.34						
26	13.10	710.1.4 of IRC:78 & 2200	Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification		60.00						
I			Superstructure								

		1	Bill of Quant	ities			Rate			Amount	
		Reference					Local	Foreign	ı	Local	Foreign
Sr no.	Item No.	of MoSRT&H		Unit	Quantity	Basic	Applicable	roreign	Basic	Applicable	roreign
110.	110.	Specificati on				Rate	taxes and duties etc.		Rate	taxes and duties etc.	
27	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade								
			CASE I Using Concrete Mixer I) FOR SOLID SLAB (p) Height upto 5 m	m ³	12.60						
			(b) Height apto 5 III		12.00						
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	1.26						
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m ³	40.00						
			Sub Total								
			AD SIDE STONE MASONRY BREAST WALL								
		ad: Approa oad = 1894	ich Road At Narakasur Hill .732 m								
			Foundation								
30	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I	1	Ordinary Soil								
	Α]	Manual Means								
	а]	Without Dewatering								
	i		upto a height of 3m	m ³	6124.25						

			Bill of Quant	itics			Rate			Amount	
		Reference					Local	Foreign	I	Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	. 0. 6.3
31	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1155.96						
32	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	173.39						
			Sub-Structure								
33	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	2991.96						
34	13.2	1300 & 2200	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	1956.24						
35	13.8	2200 & 2706	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	1740.00						
36	13.10	710.1.4 of IRC:78 & 2200	Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa	m³	234.00						
			Sub Total								

		1	Bill of Quanti	ities							
	·	Beforence		l .	ļ	l <u> </u>	Rate		· <u> </u>	Amount	
	' l	Reference	1	١ ,	Į L	li	Local	Foreign	' <u> </u>	Local	Foreign
Sr no.		of MoSRT&H Specificati on		Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			AD SIDE STONE MASONRY TOE WALL (1.2m HEIGHT)	' <u> </u>		·			·		
Nam	e of Ro	ad: RAM NA		' <u> </u>		·		'	' <u> </u>		' <u> </u>
	d: 12	_	_	·		'		<u>'</u>	·		<u>'</u>
Leng	th of R	load = 140.0		l		·		<u>'</u>	l	<u> </u>	
			Foundation	·		'		<u>'</u>	<u>'</u>		<u>'</u>
37	12.1		Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	V	1 ,	Ordinary Soil		†	 ,	†	 		1	+
	A		Manual Means	 	†	 ,	†	 	 	†	
	ii		With dewatering	m ³	713.95	 ,	†	 	 	†	
		† 1	1		1	 ,	†	 		1	
38	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
	·		(c).Stone soling 150mm thick	m ²	252.00	 ,		<u> </u>	 	†	'
		I		·		T			·		
39	12.4		PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		25.20						
			Sub-Structure	'		'		'	'		' <u> </u>
40	13.1		Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
1	' l	1	a. Random Rubble Masonry	m ³	323.14	 ,		- 		1	
				<u> </u>		 ,			<u> </u>		
41	13.2		Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	230.40						
$\vdash \vdash$	<u> </u>		Sub Total		<u> </u>	·	<u> </u>		I	<u> </u>	·
			Total	1		·		' <u>_</u>	·		¹

			Bill of Quant	itics			Rate			Amount	
		Reference				Lo	ocal	Foreign	ı	_ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	<u>.</u>	Basic Rate	Applicable taxes and duties etc.	
CON	STRUC	TION OF ROA	AD SIDE STONE MASONRY OPEN DRAIN							•	
Nam	e of Ro	oad: Approac	ch Road At Ramsa Hill								
Leng	th of R	Road = 907.1									
			Foundation								
1	12.1		Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	I		Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto 3 m height	m^3	3365.873372						
2	12.3		Sand Filling in foundation trenches as per drawing and technical specification	m ³	633.3640146						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m^2	2091.793548						
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m³	125.9514948						

			Bill of Quant	ities	I	1	D-1-	1		A	1
		Reference					Rate			Amount	
						L	ocal	Foreign		ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Sub-Structure								
5	13.5	1500, 1700 & 2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m ³	83.22786						
	10.1										
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m^3	2151.273725						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in substructure as per Technical Specifications	m²	3273.62916						
8	13.9	710.1.4 of IRC:78 & 2200	Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification	m^3	104.034825						
			Sub Total								
	D WOR										
			ch Road At Ramsa Hill								
Leng	th of F	Road = 907.1									
			SITE CLEARENCE								
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	40						

			Din or Quain				Rate			Amount	
		Reference				L	ocal	Foreign		_ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Clearing and Grubbing Road Land:								
10	2.3	201	Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness. I) By Manual Means								
			A) In area of non thorny jungle	Hect	0.36						
11	2.4	202	Dismantling of Structures Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres I) Lime / Cement Concrete A) By Manual means a) Lime Concrete, cement concrete M10 grade and below III) Dismantling Stone Masonry b) Rubble Masonry in cement mortar		0.50						
				m ³	15.00						

			-				Rate		Amount	
		Reference					Foreign			
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity		e taxes and duties	5	 taxes and	
		EARTHWOR	K, EROSSION CONTROL AND DRAINAGE				CLCI			
			Excavation in Soil with Dozer with lead upto 100 m							
12	3.3	301	Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	${\sf m}^3$	60453.53					
			Removal of Unserviceable Soil with Disposal upto 1000 metres							
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m^3	48362.83					
			Embankment Construction with Materials obtained from Borrow Pits							
14	3.16		Construction of embankment with materials obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 (including compensation of earth) (Including cost of testing of materials at site and laboratory as directed by the deptt.)							
			(b) from Govt. Land	m ³	10546.38					

			Bill of Quant	ities	I	I	D-1-	1		A	
		Reference					Rate	-		Amount	- •
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Ra	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign	
15	3.17		Embankment Construction with Materials obtained from Roadway Cutting Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	m ³	12090.71						
		SUB-BASES,	BASES (NON-BITUMINOUS) AND SHOULDERS								
16		Analyzed Item Annexure II	Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm(loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same wit hpower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position.	m³	748.28						

			Local Foleigh		Amount						
		Reference		Applicabl	Foreign						
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	_	Basic Rate	Applicable taxes and duties etc.	•
9	4.9	404 t	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								
			(A) By Manual means. I) Grading-II (b) Using Screening Type-A (13.2 mm Agg.)	m ³	498.85						
			II) Grading-III (a) Using Screening Crushable type such as Moorum or Gravel	m ³	374.14						
			RFACE COURSES (BITUMINOUS)								
17	5.1A	502	Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								

							Rate			Amount	
		Reference				L	ocal	Foreign		Local	Foreign
_	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	<u>.</u>	Basic Rate	Applicable taxes and duties etc.	
			I)With bitumen emulsion-CSS-1h	m ²	4988.52						
18	5.2		Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
		-	I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m ²	4988.52						
19	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			a) Without anti-stripping agent								
			I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour								
				m^2	4988.52						

			Bill of Quant	ities	I		Rate	I	Amount	
		Reference						F		F
Sr	Item No.	of MoSRT&H	Description	Unit	Quantity	Basic		Foreign		
no.	NO.	Specificatio n				Rate	duties			
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)							
20	5.12		a) Without anti-stripping agent I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m²	4988.52					
			Sub Total							
			KS (BOX CULVERT)							
			ch Road At Ramsa Hill							
Leng	th of R	coad = 907.1								
			Foundation							
21	12.1		Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material							
			I. in Ordinary Soil							
			A. Manual Means	3	00.44					
			(i) Upto 3 m depth	m³	36.41					

		Bill of Quant				Rate			Amount	
	Reference				L	ocal	Foreian		Local	Foreign
Item No.	of MoSRT&H Specificatio n	T&H Description catio	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	.	Basic Rate	Applicable taxes and duties etc.	
12.8 A	2100	foundation complete as per drawing and technical specification								
			m ³	3.84						
		CASE I Using Concrete Mixer	m ³	8.64						
12.40										
		c With other make ISI marked TMT rebars	Tonne	0.86						
13.5 A										
		N, Without Plasticiser								
		E. RCC M20 grade								
		CASE I Using Concrete Mixer	m^3	38.04						
13.6 (B)										
		c With other make ISI marked TMT rebars	Tonne	3.80						
	12.8 A	Item No. of MoSRT&H Specification n 12.8 A 1500, 1700 & 2100 12.40 1600 13.5 A 1500, 1700 & 2200 13.6 (B) 1600 & 2200	Item No. of MoSRT&H Specification n Description 12.8 A 2100 1500, 1700 & 2100 Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser A P.C.C. grade M15 C. R.C.C. Grade M20 CASE I Using Concrete Mixer 12.40 Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications c With other make ISI marked TMT rebars 13.5 A 2200 Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204 N, Without Plasticiser E. RCC M20 grade a. height upto 5 m CASE I Using Concrete Mixer	Item No. of MoSRT&H Specification n Description Unit 12.8 A Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification moderate of the plain/reinforced concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser A P.C.C. grade M15 C. R.C.C. Grade M20 CASE I Using Concrete Mixer m³ 12.40 1600 Supplying fitting & placing TMT bar reinforcement in superstructure including splicing complete as per drawing and technical specifications 13.5 A 2200 Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204 N, Without Plasticiser E. RCC M20 grade a. height upto 5 m CASE I Using Concrete Mixer m³ 13.6 (B) 1600 & 2200 Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications	Item No. Of MoSRT&H Specification n Description Unit Quantity 12.8 A 2100 Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification Image: Concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser A P.C.C. grade M15 m³ 3.84 C. R.C.C. Grade M20 CASE I Using Concrete Mixer m³ 8.64 12.40 Supplying fitting & placing TMT bar reinforcement in super-structure including splicing complete as per drawing and technical specifications Tonne 0.86 13.5 A 2200 Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204 N. Without Plasticiser Image: CASE I Using Concrete Mixer Image: CASE I Using Concrete	Titem No. Specification n Description Unit Specification n Description Unit Specification n Description Unit Specification Unit Specification Description Unit Specification Unit Specifi	Reference of MoSRT&H Specification In Description Unit Quantity Rapilicable Basic Rate Applicable Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification N, Without Plasticiser A P.C.C. grade M15 C. R.C.C. Grade M20 CASE I Using Concrete Mixer M³ 8.64 M³ 8.64 M³ 8.64 M³ M³ M³ M³ M³ M³ M³ M	Reference of MoSRT&H Specification n	Reference of MoSRT&H Specification n	No. No.

			Bill of Quant				Rate			Amount	
		Reference				14	ocal	Foreign		ocal	Foreign
		of					Applicabl	roreign		Jocai	roreign
Sr no.	Item No.	MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	e taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
26	13.10	710.1.4 of IRC:78 & 2200	Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification	m ³	72.00						
			Superstructure								
27	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB (p) Height upto 5 m	m^3	7.50						
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super- structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.75						
						_					
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m ³	24.00						
			Sub Total								

							Rate			Amount	
		Reference				L	ocal	Foreign		Local Fo Applicable	Foreign
Sr no.	Item No.	of MoSRT&H Specificatio n	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	5	Basic Rate	taxes and	
			AD SIDE STONE MASONRY BREAST WALL								
			ch Road At Ramsa Hill								
Leng	th of F	Road = 907.1									
			Foundation								
30	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	- 1		Ordinary Soil								
	Α		Manual Means								
	а		Without Dewatering								
	i		upto a height of 3m	m ³	5770.92						
31	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	1089.27						
32	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m ³	163.39						

			biii di Quant				Rate			Amount	
		Reference				L	ocal	Foreign		Local	Foreign
Sr no.	Item No.	No. MoSRT&H Specificatio	Description	Unit	Quantity	Basic Rate	Applicabl e taxes and duties	Torcigii	Basic Rate	Applicable taxes and duties etc.	Tolcigii
			Sub-Structure				etc.				
33	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification	m ³	2819.35						
			A. Random Rubble Masonry		2010.00						
34	13.2	1300 & 2200	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m^2	1843.38						
35	13.8	2200 & 2706	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce.								
			Complete as per drawing & technical specification	each	1640.00						
			Complete as per drawing & technical specification	Gacii	1040.00						
36	13.10		Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil								
			and bigger size towa	m^3	220.50						
			Sub Total								
I			Total			1					

			Bill of Quant	ities							
							Rate			Amount	
		Reference					Local	Foreign	L	ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
CON	STRUCT	ION OF ROA	D SIDE STONE MASONRY OPEN DRAIN								
			h Road At Sonaighuli								
		oad = 626.78									
			Foundation								
1	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	ı	1	Ordinary Soil								
	A		Manual Means								
	а		Without Dewatering								
	i	1	upto 3 m height	m ³	3027.35						
			upto 5 iii iioigiit								
2	12.3	304	Sand Filling in foundation trenches as per drawing and technical specification	m³	571.62						
3	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m²	1886.61						
4	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days	m^3	113.45						
			Sub-Structure								
		I	I .		1		I			1	

			Bill of Quant	ities	1		Rate			Amount	Ī
		Reference					Local	Foreign		Local	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	roreign	Basic Rate	Applicable taxes and duties etc.	
5	13.5	1500, 1700 & 2200	Plain/Reinforced Cement Concrete in sub-structure complete as per drawing and technical specification and steel shuttering								
			N) Without Plasticiser								
			A. P.C.C. Grade M15 Height upto 5m	m³	75.21						
6	13.4	1400 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification								
			A. Random Rubble Masonry	m ³	1926.41						
7	13.3	1300 & 2200	Plastering with cement mortar (1:3) on brick work in substructure as per Technical Specifications	m²	2945.87						
8	13.9	710.1.4 of IRC:78 & 2200	Back Filling behind abutment, wing wall and return wall complete as per drawing & technical specification								
			A. Ganular Material	m³	94.02						
			Sub Total								

			Bill of Quant								
		Reference					Rate			Amount	I
							Local	Foreign	L	<u>-ocal</u>	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
ROA	D WORK	(S									
Nam	e of Roa	ad: Approac	h Road At Sonaighuli						Į.	!	!
		oad = 626.78									
			SITE CLEARENCE								
			Cutting of Trees, Including Cutting of Trunks, Branches and Removal								
9	2.1	201	Cutting of Trees, Including Cutting of Trunks, Branches and Removal of stumps, roots, stacking of serviceable material and upto a lead of 1000 mts and earth filling in depression/pit								
			(I) Girth from 300 mm to 600 mm	each	40						
10	2.3	201	Clearing and Grubbing Road Land: Clearing and grabbing road land including uprooting rank vegetation, grass, brush, shrubs sapling and trees of girth upto 300mm removal of stumps, disposal of unserviceable materials and slaking of serviceable material to be used or auctioned upto a lead of 1000m including removal and disposal of top organic and not exceeding 150 mm in thickness. 1) By Manual Means A) In area of non thorny jungle		0.2507124						
			A) In area or non thorny jungle	11000	0.2007 124						
	l				l	1	1		l	1	1

			Bill of Quant	11.05			Rate			Amount	
		Reference					Local	Foreign	L	.ocal	Foreign
Sr no.	Item No.	of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
			Dismantling of Structures								
11	2.4	202	Dismantling of existing structures like culverts, bridges, retaining wall, and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaryfing whereever necessary, sorting the dismantled material, disposal of unserviceable material with all lifts and leads of 1000 metres								
			I) Lime / Cement Concrete A) By Manual means		Local Foreign Local Basic Rate Applicable taxes and duties etc. Applicable taxes and duties etc. Basic Rate Applicable taxes and duties etc.						
			a) Lime Concrete, cement concrete M10 grade and below	m^3	0.5						
			III) Dismantling Stone Masonry								
			b) Rubble Masonry in cement mortar	m ³	15						
		FARTINA	K EDOCCION CONTROL AND DRAINAGE								
		EARTHWOR	K, EROSSION CONTROL AND DRAINAGE								
12	3.3	301	Excavation in Soil with Dozer with lead upto 100 m Excavation for roadway in Soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 metres (average lead of 50 m), including trimming bottom of side slopes in accordance with requirements of lines, grades and cross sections	m³	12262.48						
			Removal of Unserviceable Soil with Disposal upto 1000 metres								
13	3.11	301	Removal of Unserviceable Soil with Disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid seperately as per clause 305)	m³	10472.32						

	I		Bill of Quant	ities	I	I	Rate			Amount	
		Reference					<u> </u>	Earoian		ocal	Foreign
Sr no.		of MoSRT&H Specificati on	Description	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	Foreign	Basic Rate	Applicable taxes and duties etc.	Foreign
			Embankment Construction with Materials obtained from Roadway Cutting								
14	3.17		Construction of embankment with approved materials deposited at site from roadway cutting and excavation of drains and foundations of other structures graded and compacted to meet requirement of table 300-2	${\sf m}^3$	1790.16						
15		Analyzed Item Annexure II	Construction of sub-base coarse 150mm compacted thickness by stone dust in single layer of 180 mm loose thickness including collection and supply stone dust coming out as by product during crusher running consisting of hard quarry chipping, machine broken and of size 10mm down as per IRC grading free from dust, dirt and other organic and deleterous constituents including payments of Forest Royalaty and Sales Tax, including preparation of sub-base to specified profile and grade after removal of all vegetation and extraneous material if any, dressing, cambering lightly sprinkling with water and rolling with adequate passes of 8-10T roller till the stone dust sub-grade is properly compacted. Spreading the granular materials between prepared shoulders in layers not exceeding 150mm(loose thickness, dressing, watering to bring the moisture contern to ± 2% of OMC for the entire depth of the layer and compacting the same wit hpower roller 8-10T capacity, adding or removing materials if necessary to keep the longitudinal and cross profile of the surface within permissible tollerence, checking the same with templates and straight edges, continue rolling and correcting surface irregularities as the appear within permissible tolerance checking the same with template and straight edges continue rolling and correcting surface irregularities as they appera controlling moisture content of maintaining the same above the OMC and compacting to 95% proctor density (collection of stone dust to be made from barpathar stone quarry) and measurement will be taken on the finished compacted work in position	m ³	376.07						

			Bill of Quanti				Rate				
	Item No.	Reference	of MoSRT&H Description U		Quantity	Local Foreign			ı	Foreign	
Sr no.		MoSRT&H Specificati		Unit		Basic Rate	Applicable taxes and duties etc.	<u> </u>	Basic Rate	Applicable taxes and duties etc.	
16	4.9	404	Water Bound Macadam Providing, Laying, Spreading and compacting stone aggrigates of specific size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with vibratory roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening/binding materials to fill up the interstices of coarses aggregate, watering and compacting to the required density (with an initial lead of 5 km)								
			(A) By Manual means. I) Grading-II (b) Using Screening Type-A (13.2 mm Agg.) II) Grading-III (a) Using Screening Crushable type such as Moorum or Gravel	m ³	250.71 188.03						
		BASES & SU	RFACE COURSES (BITUMINOUS)								
17	5.1A		Prime Coat Providing and applying primer coat with Bituminous emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.60kg/sqm using mechanical means.(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h	m ²	2507.12						
18	5.2	503	Tack Coat i) Providing and applying Tack Coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20kg per sqm. on the prepared bituminous surface cleaned with mechanical broom as per Technical Speification Clause 503(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
			I)With bitumen emulsion-CSS-1h								
			a) Normal bituminous surface	m^2	2507.12						

							Rate		1	Amount	
	Item No.	Reference	of oSRT&H Description		Quantity	Local Foreign			L	Foreign	
		MoSRT&H Specificati		Unit		Basic Rate	Applicable taxes and duties etc.	<u> </u>	Basic Rate	Applicable taxes and duties etc.]
19 5	5.10 A	511	Open Graded Premix Surfacing Providing, laying and rolling of open - graded premix surfacing of 20 mm thickness of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen (60/70 grade) or bitumen emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a smooth wheeled roller 8-10 T static roller capacity to required levl and grades (Including carriage upto initial lead of 5 km from quarry and carriage of mixed materials upto 10.0 km initial lead from mixing plant)(including cost of testing of materials at site and at laboratory as directed by the deptt.) a) Without anti-stripping agent								
			I) Case I: Mechanical Method using Penetration grade Bitumen and HMP of appropriate capacity not less than 75 tonnes/hour	m^2	2507.12						
			Seal Coat Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A & B seal coats(including cost of testing of materials at site and at laboratory as directed by the deptt.)								
20	5.12		a) Without anti-stripping agent I) Case I: Type A providing and laying liquid seal coat comprising of a layer of bituminous binder (paving bitumen 60/70 grade) followed by a cover of crushed stone chipping of specified grade (including carriage upto initial lead of 5 km from quarry)	m^2	2507.12						
			Sub Total								
CDOCC		NACE WORK	VC (DOV CHI VEDT)								
			(S (BOX CULVERT) n Road At Sonaighuli								
		oad = 626.78									
			Foundation								

			Bill of Quant	ities	1		Rate			Amount	
		Reference	tH Description	Unit	Quantity		Local	Foreign		Foreign	
Sr no.	Item No.	of MoSRT&H Specificati on				Basic Rate	Applicable taxes and duties etc.	roreign	Basic Rate	Applicable taxes and duties etc.	Toreign
21	12.1	304	Excavation for Structures Earthwork in excavation of foundation of structures as per drawing and technical specification clause including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides & bottom and backfilling with approved material								
			I. in Ordinary Soil								
			A. Manual Means	•							
—			(i) Upto 3 m depth	m ³	106.624						
		1500 1500 0									
22	12.8 A	2100	Providing concrete for plain/reinforced concrete in open foundation complete as per drawing and technical specification								
			N, Without Plasticiser A P.C.C. grade M15	m ³	0.00						
			C. R.C.C. Grade M15	m.	3.36						
			CASE I Using Concrete Mixer	m ³	8.64						
1			CASE I OSING CONCIECE MIXE	111	0.04						
23	12.40	1600	Supplying fitting & placing TMT bar reinforcement in super- structure including splicing complete as per drawing and technical specifications								
			c With other make ISI marked TMT rebars	Tonne	0.864						
			Substructure								
24	13.5 A	1500, 1700 & 2200	Plain/reinforced Cement concrete in substructure complete as per drawings & technical specification Clause 802, 805, 807, 1202 & 1204								
1			N, Without Plasticiser								
			E. RCC M20 grade	2							
			a. height upto 5 m	m ³	21.2						
			CASE I Using Concrete Mixer								
		1000 0 0005									
25	13.6 (B)	1600 & 2200	Supplying fitting & placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications	Tonne	2.12						
			l l	TOTILLE	2.12						

			Bill of Quant	ities			Rate			Amount	ī
		Reference of MoSRT&H Specificati on			Quantity	Local Foreig			L	Foreign	
Sr no.	Item No.		Description	Unit		Basic Rate	Applicable taxes and duties etc.	. 0. 0.3	Basic Rate	Applicable taxes and duties etc.	r o. e.g
26	13.10	710.1.4 of IRC:78 & 2200	Providing & laying filter media with granular materials/stone crushed aggrigate satisfying the requirements laid down in clause 2504.2.2 of MoRTH specification to a thickness not less than 600 mm with smaller size towards the soil & bigger size towards the wall & providing over entire surface behind abutment, wing wall, return wall to full height compacted to firm condition complete as per drawing and technical specification		38.4						
-			Superstructure								
27	14.1	1500,1600 & 1700	Furnishing and Placing Reinforced/Prestressed cement concrete in super-structure as per drawing and Technical Specification including providing plasticier (Masterplast PL - 1/SPL - 2 or equivatent), air entraining and water reducing plasticier (Masterplast PAE or equivalent) and acclerating plasticiser (Masterplast ACPL or equivalent) conforming to IS-9103-1999 and steel shuttering framework N, Without Plasticiser A RCC m20 grade CASE I Using Concrete Mixer I) FOR SOLID SLAB (p) Height upto 5 m	m ³	9.6						
28	14.2	1600	Supplying fitting & placing TMT bar reinforcement in super- structure including splicing complete as per drawing and technical specifications c With other make ISI marked TMT rebars	Tonne	0.96						
29	14.9	2705	Drainage spout complete as per drawing & Technical specification	m³	32						
			Sub Total								

			Bill or Quant		1		Rate				
		Reference	of MoSRT&H Description		Quantity	Local		Foreign	Local		Foreign
Sr no.	Item No.	MoSRT&H Specificati		Unit		Basic Rate	Applicable taxes and duties etc.		Basic Rate	Applicable taxes and duties etc.	
CON	STRUCT	ION OF ROA	D SIDE STONE MASONRY BREAST WALL								
		ad: Approac oad = 626.78	h Road At Sonaighuli 31 m								
			Foundation								
30	12.1	304	Excavation for Structures Earthwork in excavation of foundation in structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterous matter, dressing of sides and bottom and backfilling with approved material								
	1		Ordinary Soil								
	A		Manual Means		1						
	a		Without Dewatering	3							
	ı		upto a height of 3m	m ³	588.87						
31	17.56		Providing brick soling in foundation and under floor with stone/ best quality picked jhama brick, sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering, complete.								
			(c).Stone soling 150mm thick	m ²	111.15						
32	12.4	2100	PCC 1:3:6 in Foundation Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregates 40mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days		16.67						

			Bill of Qualit				Rate				
		Reference				Local		Foreign	L	.ocal	Foreign
Sr no.	Item No.	MoSRT&H Description I	Unit	Quantity	Basic Rate	Applicable taxes and duties etc.	_	Basic Rate	Applicable taxes and duties etc.		
			Sub-Structure								
33	13.1	1300 & 2200	Stone Masonry work in cement mortar 1:3 in sub-structure complete as per drawing and technical specification	m ³	287.69						
			A. Random Rubble Masonry								
34	13.2	1300 & 2200	Pointing with cement mortar (1:3) on brickwork in sub-structure as per drawing & technical specification	m²	188.10						
35	13.8	2200 & 2706	Providing weepholes on brick/plain/reinforced abutment, wing wall/return wall 100mm dia AC pipe, extending through full width of the structure snd slope of 1V:20H towards drawing foce. Complete as per drawing & technical specification	each	172.00						
				CUOIT	172.00						
36	13.10		Providing and laying filter media with granular materials/crushed stone aggrigates satisfying the requirements laid down in clause 2504.2.2 of MoRTH Specification to a thickness not less than 600 mm with smaller size towards the soil and bigger size towa	m ³	22.50						
			Sub Total								
		<u> </u>	Total			•			_		